



December 30, 2009

Charles L.A. Terreni
Chief Clerk and Administrator
South Carolina Public Service Commission
Post Office Drawer 11649
Columbia, South Carolina 29211

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.
Power Plant Performance Report
Docket No. 2006-224-E

Dear Mr. Terreni:

Enclosed is the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of November 2009.

Sincerely,

/s/

Len S. Anthony
General Counsel
Progress Energy Carolinas, Inc.

LSA/dhs
Enclosures
45612

c: John Flitter (ORS)

November 2009

The following units had no off-line outages during the month of November:

Brunswick Unit 1
Brunswick Unit 2
Roxboro Unit 3
Roxboro Unit 4

Harris Unit 1

Full Forced Outage

- A. Duration: The unit was taken out of service at 22:42 on November 15, and was returned to service at 20:20 on November 20, a duration of 117 hours and 38 minutes.
- B. Cause: Manual Shutdown due to Loss of Lube Oil
- C. Explanation: On November 15, plant operators tripped the reactor and turbine due to an oil leak from a Hydrogen Seal Oil skid filter. During routine filter cleaning activities, a T-handle ejected from the filter assembly causing the oil leak. When the oil leak occurred, operators removed the unit from service to protect the main turbine and generator.
- D. Corrective Action: The oil spill was contained and there were no adverse environmental impacts. After the spilled oil was removed, the turbine inspected, and the filter assembly replaced, the unit was returned to service on November 20. A preliminary investigation has determined that retaining clips inside the filter assembly were missing. The investigation into why the clips were missing is not yet complete.

Robinson Unit 2

Full Forced Outage

- A. Duration: The unit was taken out of service at 22:03 on November 6, and was returned to service at 19:11 on November 8, a duration of 45 hours and 8 minutes.
- B. Cause: Feedwater Regulating Valve Controller Failure
- C. Explanation: On 11/6/09, the Feedwater Regulating Valve (FRV) for “A” Steam Generator unexpectedly closed. This resulted in a rapidly lowering steam generator water level and required a manual reactor trip to be inserted. Subsequent troubleshooting identified that the flow error signal summator for the “A” FRV control loop had failed (the power fuse was blown). Post-mortem inspection by the vendor confirmed that a ceramic capacitor in the module power supply had failed, causing a short circuit which subsequently blew the power fuse.
- D. Corrective Action: The summator was replaced, and the loop was calibrated satisfactorily. The unit was returned to service on November 8.

Mayo Unit 1

Full Forced Outage

- A. Duration: The unit was taken out of service at 13:39 on November 26, and was returned to service at 21:34 on November 26, a duration of 7 hours and 55 minutes.
- B. Cause: Malfunction in Coal Pulverizer Feeder
- C. Explanation: The unit was forced out of service due to an electrical malfunction of the coal pulverizer feeder.
- D. Corrective Action: Maintenance activities were performed to repair the coal pulverizer feeder, and the unit was returned to service.

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Roxboro Unit 2

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 22:59 on October 30, and was returned to service at 0:46 on November 11, a duration of 266 hours and 47 minutes. The unit was offline for 241 hours and 46 minutes during the month of November.
- B. Cause: Boiler Inspection
- C. Explanation: The unit was taken out of service for a planned boiler inspection.
- D. Corrective Action: Planned outage activities, including boiler inspections and testing, were completed, and the unit was returned to service.

Full Forced Outage

- A. Duration: The unit was taken out of service at 4:14 on November 11, and was returned to service at 9:54 on November 11, a duration of 5 hours and 40 minutes.
- B. Cause: Excessive Turbine Vibration
- C. Explanation: The unit tripped off-line due to high turbine vibration. Investigation revealed no abnormal condition or cause of the vibration. However, it was suspected that the vibration was attributed to a turbine rub caused by a rotor issue.
- D. Corrective Action: Adjustments were made on the turbine to correct excessive vibration. Upon completion of turbine adjustments, the unit was returned to service with no further issues.

Full Forced Outage

- A. Duration: The unit was taken out of service at 16:55 on November 17, and was returned to service at 4:13 on November 19, a duration of 35 hours and 18 minutes.
- B. Cause: Boiler Tube Leak
- C. Explanation: The unit was taken out of service to investigate and repair a tube leak in the waterwall section of the boiler.
- D. Corrective Action: Weld repairs were made to correct the boiler tube leak, and the unit was returned to service.

| | Month of November 2009 | | Twelve Month Summary | | See Notes* |
|-------------------------|------------------------|---------------|----------------------|---------------|---------------|
| | | | | | |
| MDC | 938 MW | | 938 MW | | 1 |
| Period Hours | 721 HOURS | | 8,760 HOURS | | |
| Net Generation | 687,861 MWH | | 8,028,011 MWH | | 2 |
| Capacity Factor | 101.71 % | | 97.70 % | | |
| Equivalent Availability | 99.05 % | | 96.02 % | | |
| Output Factor | 101.71 % | | 100.76 % | | |
| Heat Rate | 10,332 BTU/KWH | | 10,431 BTU/KWH | | |
| | MWH | % of Possible | MWH | % of Possible | |
| Full Scheduled | 0 | 0.00 | 0 | 0.00 | 3 |
| Partial Scheduled | 6,431 | 0.95 | 29,532 | 0.36 | 4 |
| Full Forced | 0 | 0.00 | 249,696 | 3.04 | 5 |
| Partial Forced | 0 | 0.00 | 48,264 | 0.59 | 6 |
| Economic Dispatch | 0 | 0.00 | 0 | 0.00 | 7 |
| Possible MWH | 676,298 | | 8,216,880 | | 8 |

* See 'Notes for Nuclear Units' filed with the January 2009 report.

** Gross of Power Agency

| | Month of November 2009 | | Twelve Month Summary | | See Notes* |
|-------------------------|------------------------|---------------|----------------------|---------------|---------------|
| | | | | | |
| MDC | 920 MW | | 921 MW | | 1 |
| Period Hours | 721 HOURS | | 8,760 HOURS | | |
| Net Generation | 676,898 MWH | | 6,406,304 MWH | | 2 |
| Capacity Factor | 102.05 % | | 79.37 % | | |
| Equivalent Availability | 99.31 % | | 78.00 % | | |
| Output Factor | 102.05 % | | 98.45 % | | |
| Heat Rate | 10,518 BTU/KWH | | 10,639 BTU/KWH | | |
| | MWH | % of Possible | MWH | % of Possible | |
| Full Scheduled | 0 | 0.00 | 15,153,958 | 187.74 | 3 |
| Partial Scheduled | 0 | 0.00 | 47,570 | 0.59 | 4 |
| Full Forced | 0 | 0.00 | 225,676 | 2.80 | 5 |
| Partial Forced | 4,585 | 0.69 | 169,010 | 2.09 | 6 |
| Economic Dispatch | 0 | 0.00 | 0 | 0.00 | 7 |
| Possible MWH | 663,320 | | 8,071,610 | | 8 |

* See 'Notes for Nuclear Units' filed with the January 2009 report.

** Gross of Power Agency

| | Month of November 2009 | | Twelve Month Summary | | See Notes* |
|-------------------------|------------------------|---------------|----------------------|---------------|---------------|
| | | | | | |
| MDC | 900 MW | | 900 MW | | 1 |
| Period Hours | 721 HOURS | | 8,760 HOURS | | |
| Net Generation | 551,057 MWH | | 7,397,731 MWH | | 2 |
| Capacity Factor | 84.92 % | | 93.83 % | | |
| Equivalent Availability | 82.82 % | | 91.62 % | | |
| Output Factor | 101.48 % | | 101.58 % | | |
| Heat Rate | 10,615 BTU/KWH | | 10,721 BTU/KWH | | |
| | MWH | % of Possible | MWH | % of Possible | |
| Full Scheduled | 0 | 0.00 | 495,270 | 6.28 | 3 |
| Partial Scheduled | 0 | 0.00 | 52,466 | 0.67 | 4 |
| Full Forced | 105,870 | 16.32 | 105,870 | 1.34 | 5 |
| Partial Forced | 5,620 | 0.87 | 6,844 | 0.09 | 6 |
| Economic Dispatch | 0 | 0.00 | 0 | 0.00 | 7 |
| Possible MWH | 648,900 | | 7,884,000 | | 8 |

* See 'Notes for Nuclear Units' filed with the January 2009 report.

** Gross of Power Agency

| | Month of November 2009 | | Twelve Month Summary | | See Notes* |
|-------------------------|------------------------|---------------|----------------------|---------------|---------------|
| | | | | | |
| MDC | 710 MW | | 710 MW | | 1 |
| Period Hours | 721 HOURS | | 8,760 HOURS | | |
| Net Generation | 503,638 MWH | | 6,432,202 MWH | | 2 |
| Capacity Factor | 98.38 % | | 103.42 % | | |
| Equivalent Availability | 92.36 % | | 98.05 % | | |
| Output Factor | 104.95 % | | 105.01 % | | |
| Heat Rate | 10,670 BTU/KWH | | 10,674 BTU/KWH | | |
| | MWH | % of Possible | MWH | % of Possible | |
| Full Scheduled | 0 | 0.00 | 49,404 | 0.79 | 3 |
| Partial Scheduled | 0 | 0.00 | 16,961 | 0.27 | 4 |
| Full Forced | 32,044 | 6.26 | 44,718 | 0.72 | 5 |
| Partial Forced | 7,065 | 1.38 | 10,316 | 0.17 | 6 |
| Economic Dispatch | 0 | 0.00 | 0 | 0.00 | 7 |
| Possible MWH | 511,910 | | 6,219,600 | | 8 |

* See 'Notes for Nuclear Units' filed with the January 2009 report.

| | Month of November 2009 | | Twelve Month Summary | | See Notes* |
|-------------------------|------------------------|---------------|----------------------|---------------|---------------|
| | | | | | |
| MDC | 742 MW | | 742 MW | | 1 |
| Period Hours | 721 HOURS | | 8,760 HOURS | | |
| Net Generation | 347,022 MWH | | 3,960,896 MWH | | 2 |
| Capacity Factor | 64.87 % | | 60.94 % | | |
| Equivalent Availability | 93.77 % | | 88.09 % | | |
| Output Factor | 65.59 % | | 70.68 % | | |
| Heat Rate | 11,051 BTU/KWH | | 10,748 BTU/KWH | | |
| | MWH | % of Possible | MWH | % of Possible | |
| Full Scheduled | 0 | 0.00 | 662,075 | 10.19 | 3 |
| Partial Scheduled | 0 | 0.00 | 54,603 | 0.84 | 4 |
| Full Forced | 5,874 | 1.10 | 19,329 | 0.30 | 5 |
| Partial Forced | 27,453 | 5.13 | 38,411 | 0.59 | 6 |
| Economic Dispatch | 154,632 | 28.90 | 1,764,606 | 27.15 | 7 |
| Possible MWH | 534,982 | | 6,499,920 | | 8 |

* See 'Notes for Fossil Units' filed with the January 2009 report.

** Gross of Power Agency

| | Month of November 2009 | | Twelve Month Summary | | See Notes* |
|-------------------------|------------------------|---------------|----------------------|---------------|---------------|
| | | | | | |
| MDC | 662 MW | | 663 MW | | 1 |
| Period Hours | 721 HOURS | | 8,760 HOURS | | |
| Net Generation | 205,409 MWH | | 4,227,694 MWH | | 2 |
| Capacity Factor | 43.04 % | | 72.82 % | | |
| Equivalent Availability | 56.12 % | | 85.91 % | | |
| Output Factor | 70.80 % | | 83.06 % | | |
| Heat Rate | 9,183 BTU/KWH | | 8,818 BTU/KWH | | |
| | MWH | % of Possible | MWH | % of Possible | |
| | ----- | ----- | ----- | ----- | |
| Full Scheduled | 163,801 | 34.32 | 386,057 | 6.65 | 3 |
| Partial Scheduled | 20,442 | 4.28 | 52,184 | 0.90 | 4 |
| Full Forced | 23,369 | 4.90 | 301,887 | 5.20 | 5 |
| Partial Forced | 1,830 | 0.38 | 77,484 | 1.33 | 6 |
| Economic Dispatch | 62,451 | 13.08 | 760,510 | 13.10 | 7 |
| Possible MWH | 477,302 | | 5,805,690 | | 8 |

* See 'Notes for Fossil Units' filed with the January 2009 report.

| | Month of November 2009 | | Twelve Month Summary | | See Notes* |
|-------------------------|------------------------|---------------|----------------------|---------------|---------------|
| | | | | | |
| MDC | 695 MW | | 696 MW | | 1 |
| Period Hours | 721 HOURS | | 8,760 HOURS | | |
| Net Generation | 265,350 MWH | | 3,817,430 MWH | | 2 |
| Capacity Factor | 52.95 % | | 62.63 % | | |
| Equivalent Availability | 99.98 % | | 91.69 % | | |
| Output Factor | 52.95 % | | 66.67 % | | |
| Heat Rate | 11,431 BTU/KWH | | 10,695 BTU/KWH | | |
| | MWH | % of Possible | MWH | % of Possible | |
| | | | | | |
| Full Scheduled | 0 | 0.00 | 362,106 | 5.94 | 3 |
| Partial Scheduled | 0 | 0.00 | 89,495 | 1.47 | 4 |
| Full Forced | 0 | 0.00 | 7,437 | 0.12 | 5 |
| Partial Forced | 101 | 0.02 | 47,171 | 0.77 | 6 |
| Economic Dispatch | 235,644 | 47.03 | 1,772,001 | 29.07 | 7 |
| Possible MWH | 501,095 | | 6,095,500 | | 8 |

* See 'Notes for Fossil Units' filed with the January 2009 report.

| | Month of November 2009 | | Twelve Month Summary | | See Notes* |
|-------------------------|------------------------|---------------|----------------------|---------------|---------------|
| | | | | | |
| MDC | 698 MW | | 698 MW | | 1 |
| Period Hours | 721 HOURS | | 8,760 HOURS | | |
| Net Generation | 341,896 MWH | | 4,327,734 MWH | | 2 |
| Capacity Factor | 67.94 % | | 70.78 % | | |
| Equivalent Availability | 100.00 % | | 93.85 % | | |
| Output Factor | 67.94 % | | 74.78 % | | |
| Heat Rate | 12,198 BTU/KWH | | 11,518 BTU/KWH | | |
| | MWH | % of Possible | MWH | % of Possible | |
| | | | | | |
| Full Scheduled | 0 | 0.00 | 284,249 | 4.65 | 3 |
| Partial Scheduled | 0 | 0.00 | 25,337 | 0.41 | 4 |
| Full Forced | 0 | 0.00 | 5,596 | 0.09 | 5 |
| Partial Forced | 0 | 0.00 | 60,895 | 1.00 | 6 |
| Economic Dispatch | 161,362 | 32.06 | 1,410,669 | 23.07 | 7 |
| Possible MWH | 503,258 | | 6,114,480 | | 8 |

* See 'Notes for Fossil Units' filed with the January 2009 report.

** Gross of Power Agency

| Plant | Unit | Current MW Rating | January 2008 - December 2008 | November 2009 | January 2009 - November 2009 |
|----------------------|------|----------------------|---------------------------------|---------------|---------------------------------|
| Asheville | 1 | 191 | 67.84 | 68.11 | 70.38 |
| Asheville | 2 | 185 | 64.83 | 51.18 | 58.07 |
| Cape Fear | 5 | 144 | 69.98 | 34.61 | 63.30 |
| Cape Fear | 6 | 172 | 61.62 | 44.77 | 60.44 |
| Lee | 1 | 74 | 62.88 | 38.60 | 47.05 |
| Lee | 2 | 77 | 50.49 | 34.27 | 39.70 |
| Lee | 3 | 246 | 38.21 | 43.74 | 56.88 |
| Mayo | 1 | 742 | 62.59 | 64.87 | 60.35 |
| Robinson | 1 | 174 | 65.88 | 60.71 | 59.02 |
| Roxboro | 1 | 369 | 69.79 | 69.73 | 79.88 |
| Roxboro | 2 | 662 | 78.24 | 43.04 | 72.05 |
| Roxboro | 3 | 695 | 66.00 | 52.95 | 61.96 |
| Roxboro | 4 | 698 | 70.32 | 67.94 | 70.60 |
| Sutton | 1 | 93 | 46.46 | 37.25 | 37.16 |
| Sutton | 2 | 104 | 55.49 | 39.03 | 43.17 |
| Sutton | 3 | 403 | 56.73 | 7.24 | 48.47 |
| Weatherspoon | 1 | 48 | 42.83 | 0.00 | 11.44 |
| Weatherspoon | 2 | 49 | 41.04 | 0.00 | 12.87 |
| Weatherspoon | 3 | 75 | 56.58 | 0.00 | 20.49 |
| Fossil System Total | | 5,201 | 64.48 | 49.78 | 61.33 |
| Brunswick | 1 | 938 | 85.33 | 101.71 | 97.29 |
| Brunswick | 2 | 920 | 95.43 | 102.05 | 77.31 |
| Harris | 1 | 900 | 98.94 | 84.92 | 92.95 |
| Robinson Nuclear | 2 | 710 | 87.02 | 98.38 | 103.80 |
| Nuclear System Total | | 3,468 | 91.90 | 96.76 | 92.20 |
| Total System | | 8,669 | 75.45 | 68.58 | 73.68 |

Amended SC Fuel Rule
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor of $\geq 92.5\%$ during the 12 month period under review. For the test period April 1, 2009 through November 30, 2009, actual period to date performance is summarized below:

Period to Date: April 1, 2009 to November 30, 2009

Nuclear System Capacity Factor Calculation (Based on net generation)

| | |
|---|--------------------|
| A.. Nuclear system actual generation for SCPSC test period | A = 18,621,298 MWH |
| B. Total number of hours during SCPSC test period | B = 5,857 hours |
| C. Nuclear system MDC during SCPSC test period (see page 2) | C = 3,468 MW |
| D. Reasonable nuclear system reductions (see page 2) | D = 2,088,609 MWH |

A. SC Fuel Case nuclear system capacity factor: $[(A + D) / (B + C)] * 100 = 102.0\%$

NOTE:

If Line Item E $> 92.5\%$, presumption of utility's minimum cost of operation.

If Line Item E $< 92.5\%$, utility has burden of proof of reasonable operations.

Amended SC Fuel Rule
Nuclear System Capacity Factor Calculation
Reasonable Nuclear System Reductions
Period to Date: April 1, 2009 to November 30, 2009

| Nuclear Unit Name and Designation | BNP Unit # 1 | BNP Unit # 2 | HNP Unit # 1 | RNP Unit # 2 | Nuclear System |
|---|-----------------|-----------------|-----------------|-----------------|-------------------|
| Unit MDC | 938 MW | 920 MW | 900 MW | 710 MW | 3,468 MW |
| Reasonable refueling outage time (MWH) | 0 | 632,331 | 495,270 | 0 | |
| Reasonable maintenance, repair, and equipment replacement outage time (MWH) | 275,694 | 368,698 | 106,992 | 81,323 | |
| Reasonable coast down power reductions (MWH) | 0 | 0 | 24,856 | 0 | |
| Reasonable power ascension power reductions (MWH) | 13,400 | 40,302 | 25,920 | 0 | |
| Prudent NRC required testing outages (MWH) | 11,976 | 11,619 | 228 | 0 | |
| SCPSC identified outages not directly under utility control (MWH) | 0 | 0 | 0 | 0 | |
| Acts of Nature reductions (MWH) | 0 | 0 | 0 | 0 | |
| Reasonable nuclear reduction due to low system load (MWH) | 0 | 0 | 0 | 0 | |
| Unit total excluded MWH | 301,070 | 1,052,950 | 653,266 | 81,323 | |
| Total reasonable outage time exclusions [carry to Page 1, Line D] | | | | | 2,088,609 |